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(71) Applicant *(for all designated States except US)*: **SHARP KABUSHIKI KAISHA** [JP/JP]; 22-22, Nagaike-cho, Abeno-ku, Osaka-shi, Osaka, 5458522 (JP).

(72) Inventor; and

(75) Inventor/Applicant *(for US only)*: **NAKANISHI, Ken** [JP/JP]; 65-1-307, Eiwacho, Kashihara-shi, Nara, 6340046 (JP).

(74) Agent: **OKUDA, Seiji**; OKUDA & ASSOCIATES, 10th Floor, Osaka Securities Exchange Bldg., 8-16, Kitahama 1-chome, Chuo-ku, Osaka-shi, Osaka 541-0041 (JP).

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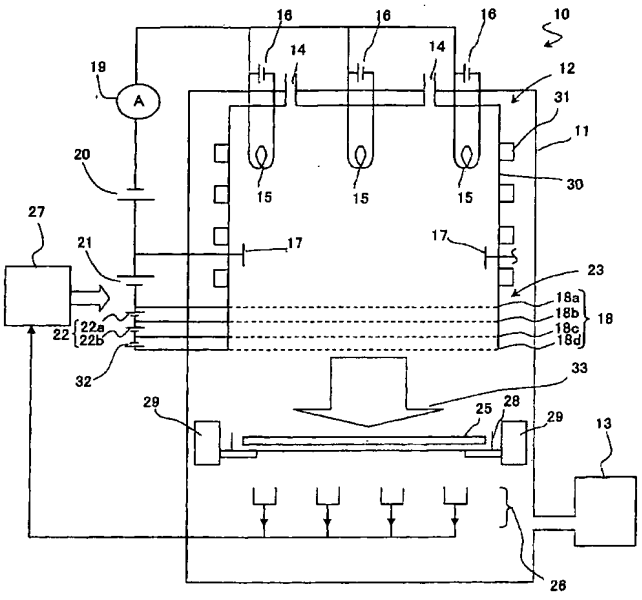
(54) Title: ION DOPING APPARATUS, ION DOPING METHOD, SEMICONDUCTOR DEVICE, AND METHOD OF FABRICATING SEMICONDUCTOR DEVICE



(57) Abstract: An ion doping apparatus includes: a chamber 11; a discharge section 13 for discharging a gaseous content from within the chamber 11; an ion source 12 being provided in the chamber 11 and including an inlet 14 through which to introduce a gas containing an element to be used for doping, the ion source 12 decomposing the gas introduced through the inlet 14 to generate ions containing the element to be used for doping; an acceleration section 23 for pulling out from the ion source 12 the ions generated at the ion source 12 and accelerating the ions toward a target object held in the chamber; and a beam current meter 26 for measuring a beam current caused by the accelerated ions. The beam current is measured by the beam current meter 26 a plurality of times, and if a result of the measurements indicates a stability of the beam current, the ion doping apparatus automatically begins to implant into the target object the ions containing the element to be used for doping. Thus, an ion doping apparatus having excellent doping amount controllability is provided.

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